

Detailed course programme

ERA_IP_7_2009/10/2007_3

Student partnership for reduction of wastewater treatment contribution to global warming

Date	Monday 07-06-2010	Tuesday 08-06-2010	Wednesday 09-06-2010	Thursday 10-06-2010	Friday 11-06-2010	Saturday 12-06-2010	Sunday 13-06-2010	Monday 14-06-2010	Tuesday 15-06-2010	Wednesday 16-06-2010	Thursday 17-06-2010	Friday 18-06-2010	Saturday 19-06-2010
Course day	1	2	3	4	5	6	7	8	9	10	11	12	13
		9:00 - 9:30 Course opening and welcome speech Dean/Director			8:30 - 9:15 New trends and challenges in sludge EL	8:30 - 10:00 Energy and mass balance at municipal wwtp SMR				8:30 - 10:00 Optimization of wwtp with computer simulation JM			
		9:30 - 10:00 Sustainable management at wastewater treatment JM	8:30 - 11:00 Global climate change - part 2 (incl. 15 min break)		9:30 - 10:15 Management and utilization of biogas EL			9:00 - 10:30 Minimization of sludge production and sludge disintegration AC/MCR					
		10:15 - 12:45 Global climate change - part 1 (incl. 15 min break)		Technical trip #1	10:30 - 13:00 Anaerobic degradation and biogas production (incl. 15 min break). SMR/MCR	10:15 - 11:45 Mass balance exercise (calculations) SMR/MCR		10:45 - 12:15 Hydrogen production (incl. Cooprocessing with solid waste) AM/GDG	Technical trip #2	10:15 - 13:00 Optimization exercise (incl. 15 min break)	Technical trip #3		
			11:15 - 12:45 Nutrient removal exercise (calculations) EP			12:00 - 13:30 Energy recovery and gas emission from sludge handling EL							
		12:45 - 13:45 Lunch break JMU	12:45 - 13:45 Lunch break EP	13:00 - 14:00 Lunch break All teachers	13:00 - 14:00 Lunch break AM/GC			12:30 - 13:15 Heat recovery from wastewater part 2 JMU	Approx. 13:00 - 14:00 Lunch break All teachers	13:00 - 14:00 Lunch break JM/EP/AC	13:00 - 14:00 Lunch break All teachers		
		13:45 - 15:15 Integrated systems for nutrient removal - introduction to the topic JM	13:45 - 15:15 Monitoring and control of WWTP for decreasing energy consumption SMR	14:00 - 15:30 Gas emission assessment. Comparison of aerobic and anaerobic wwt MCR/SMR	14:00 - 15:30 Biogas production exercise AM/GC				14:15 - 16:45 New trends and challenges in wwt treatment (MBBR, gran sludge) (incl. 15 min break) AC/SM	14:00 - 17:30 Group exercise - meeting 5 (report writing, preparing the presentations)	14:00 - 16:30 EIA at wastewater treatment plants (incl. 15 min break) AC/EL	14:00 - 15:30 Course wrap-up/ Certificates/ Evaluation/ Photo session All teachers	
		15:30 - 17:00 Innovative nitrogen removal systems based on Anammox process EP	15:30 - 17:00 Group exercise - meeting 1 JM/JMU/SMR/EP	15:45 - 16:30 Introduction to sludge treatment SM	15:45 - 16:30 Heat recovery from wastewater part 1 JMU								
	Arrival of Italian and Polish students to Stockholm - accomodation at Stay-At Bromma hotel			16:45 - 18:15 Group exercise - meeting 2 AM/GC/SM/MCR	16:45 - 18:15 Group exercise - meeting 3 GC/EL/JMU	Afternoon - individual planning		Whole day cruise to Baltic sea with lectures on ship (rented conference room) and dinner in the afternoon (approx. 7:10 - 18:00)		16:45 - 18:15 Group exercise - meeting 4 GDG/GC/SM/JMU			
	Organizational meeting at the hotel		19:00 - ?? Integration meeting										
												8:30 - 13:00 Student presentations and discussion (incl. breaks)	Departure of Italian students from Stockholm
												17:00 - 17:45 Final test All teachers	Departure of Polish students from Stockholm

Lecture	Exercise	Group exercise / Consultations with teachers	Technical visits	Meetings and others
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